Instruction Manual

HITACHI
Inspire the Next

Model name

DZHV598E
DZHV598ER

Precautions

Safety Instruction

- Do not store the camera in intense heat or cold for long periods of time, as this may result in permanent damage to the camera.
- Do not use or store the product in dusty, dirty, or sandy areas, as its components may be damaged.
- Do not drop, puncture or disassemble the camera. High-voltage internal components create the risk of electric shock when exposed.
- Use the camera with care. Rough handling may damage the internal components.
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the product. Clean only with a slightly damp soft cloth.
- Do not ignite the flash close to eyes, or closer than prescribed minimum distances as this may result in damage to vision. When using the flash, the camera should be at least one meter from the eyes of the subject.
- Do not open the battery cover while an image is being recorded. Doing so will not only make storage of the current image impossible, it can also corrupt other image data already stored in file.
- Test for proper operation before using the camera

Operating Environment Conditions

- This camera is designed for use in temperatures ranging from 5°C to 35°C (41°F to 95°F).
- Do not use or keep the camera in the following areas:

- In areas subject to direct sunlight
- In areas subject to high humidity or dust
- Near air conditioners, heaters, or other areas subject to temperature extremes
- Inside of a closed vehicle, especially one parked in the sun.
- In areas subject to strong vibration

Battery Usage and Power Supply

- Use only the type of battery that came with your camera. Do not use batteries of different specifications. Doing so may lead to the potential for serious damage.
- Insert the battery according to the instructions. Inserting the battery incorrectly can cause damage to the product and possibly start a fire.
- Remove the battery to avoid the fluid leakage if the camera is not going to be used for an extended time.
- If the battery is crushed or damaged, remove it immediately to avoid battery fluid leakage and abnormal expansion.
- The camera may feel warm after long periods of continuous use which is normal and not a malfunction. Battery will be in high temperature after long time using (about 1hr), Please be careful while taking out the battery.
- Please be careful if you may need to take out the battery by finger nail.

SOME DOS AND DON'TS ON THE SAFE USE OF EQUIPMENT

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

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DO read the operating instructions before you attempt to use the equipment.

DO ensure that all electrical connections (including the mains plug, extension leads and inter-connections between the pieces of equipment) are properly made and in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug before making or changing connections.

DO consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

DO be careful with glass panels or doors on equipment.

DO route the mains lead so that it is not likely to be walked on, crushed, chafed, or subjected to excessive wear and tear or heat.

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DON'T remove any fixed cover as this may expose dangerous voltages.

DON'T obstruct the ventilation openings of the equipment with items such as newspapers, tablecloths, curtains, etc. Overheating will cause damage and shorten the life of the equipment.

DON'T allow electrical equipment to be exposed to dripping or splashing, or objects filled with liquids, such as vases, to be placed on the equipment.

DON'T place hot objects or naked flame sources such as lighted candles or nightlights on, or close to equipment. High temperatures can melt plastic and lead to fires.

DON'T use makeshift stands and NEVER fix legs with wood screws - to ensure complete safety always fit the manufacturer's approved stand or legs with the fixings provided according to the instructions.

DON'T use equipment such as personal stereos or radios so that you are distracted from the requirements of traffic safety. It is illegal to watch television whilst driving.

DON'T listen to headphones at high volume, as such use can permanently damage your hearing.

DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a stand-by mode. Switch off using the switch on the equipment and make sure that your family know how to do this. Special arrangements may need to be made for infirm or handicapped people.

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way - switch off, withdraw the mains plug and consult your dealer.

ABOVE ALL

--- NEVER let anyone especially children push anything into holes, slots or any other opening in the case - this could result in a fatal electrical shock;

--- NEVER guess or take chances with electrical equipment of any kind

--- it is better to be safe than sorry!

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Section 1
Getting to Know Your Camera

Overview

The camera with 5 Mega Pixel sensor can take H.264 videos. By way of using H.264 technology, more videos can be taken within certain amount of memory. High quality images with up to 16 mega-pixels can also be delivered smoothly. With a colour LCD monitor, users can compose images and examine them easily.

The camera features 3” (16:9) LCD touch panel which is an ideal platform for you to operate your camera. The menu options are accessible with your finger. With the touch panel, you can select the options directly and quickly.

The camera also features video recording at HD resolution of 1920x1080. You can also connect it to an HDTV via an HDMI cable, and easily playback the recorded high-definition videos on the wide screen HDTV.

Moreover, the camera has an advanced uploading feature. With the exclusive built-in **Internet Direct** application, you can upload the videos captured by the camera to the web site more effortlessly .

ISO sensitivity and colour balance can either be adjusted automatically or changed manually. A 120x digital zoom helps you to control over the videos and photos you take.

The varied effect options, such as Time Lapse and Slow Motion, make recording more fun.

The built-in memory allows you to take photos and to record videos without a memory card. The memory card slot allows users to increase the storage capacity.

Hitachi cannot compensate for any damages caused when recording is not made normally or recorded contents cannot be played back because of a defect in the digital camera device or memory card. Hitachi cannot be responsible for your recorded video and audio.

If you or a third party make a mistake when handling this digital camera device or memory card, etc., the recorded contents may be lost. Hitachi cannot be responsible for compensation for damage due to loss of recorded contents.

Note

- *Partial memory of the built-in memory is used for the camera’s Firmware code* and software*.*
- *Install the bundled software application on the CD, ArcSoft MediaImpression, for viewing the videos correctly on a PC.*

Features

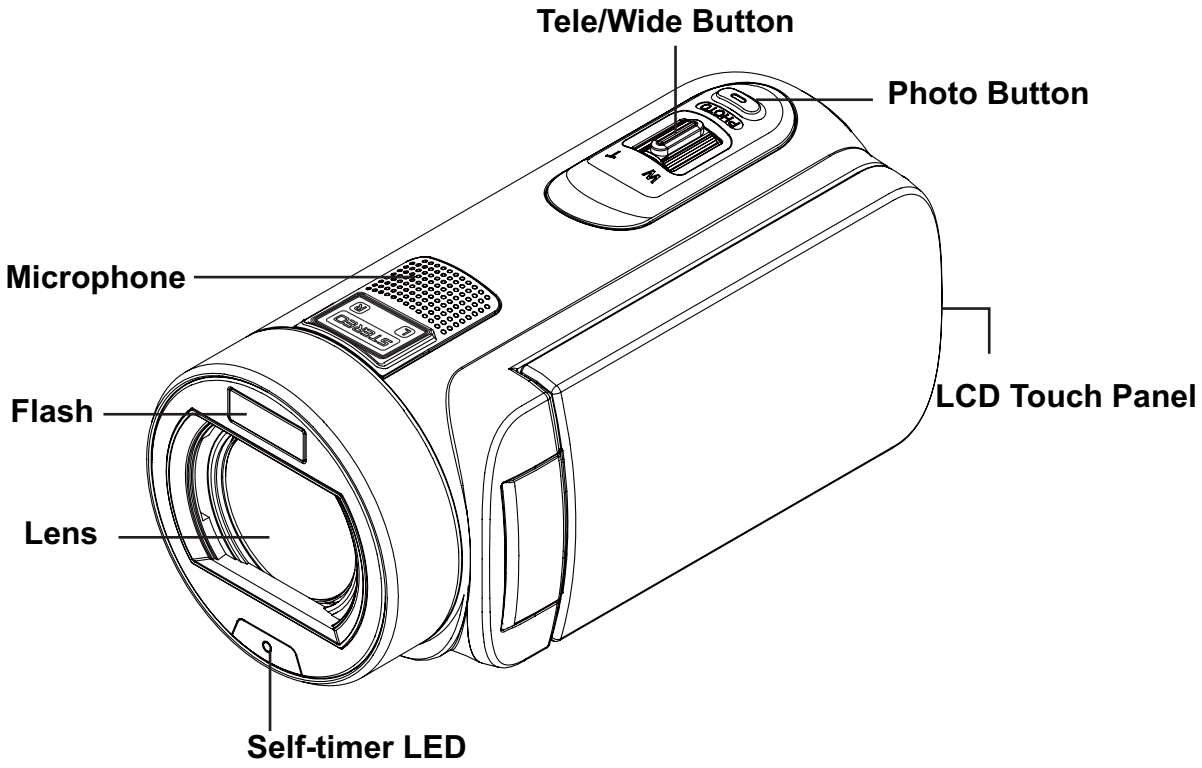
- 23X Optical Zoom
- 3” touch LCD (16:9)
- Digital Light
- Stabilization
- Time Lapse
- Slow Motion
- Pre Record
- Pause Record
- ISO 6400
- Motion Detection
- Internet Direct
- Stereo microphone

Standard Accessories

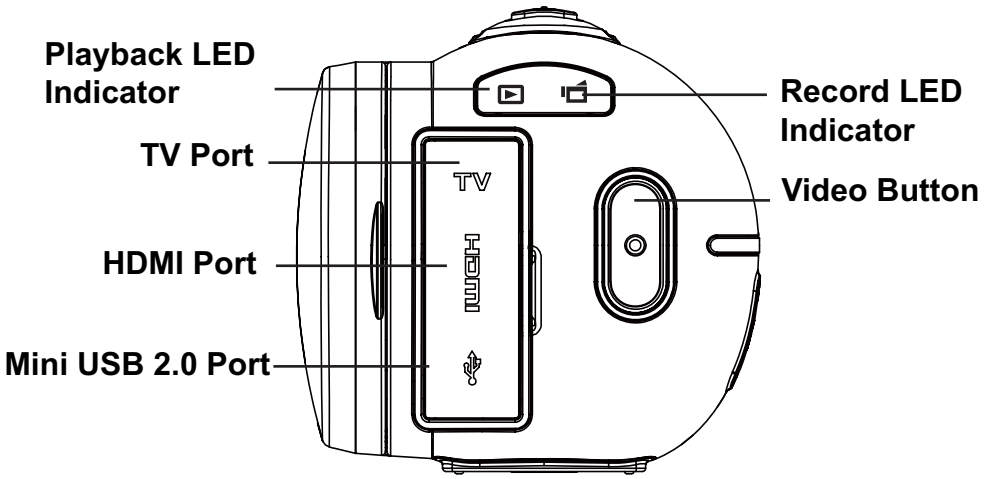
Unpack the package and make sure all standard accessories listed are included:

- Camera
- USB Cable
- AV Cable
- HDMI Cable
- Adaptor
- Lithium-ion Rechargeable Battery
- Quick Guide
- CD-ROM (Software, User’s Manual)
- Pouch
- Lens Cover Set (Lens cover and Strap)

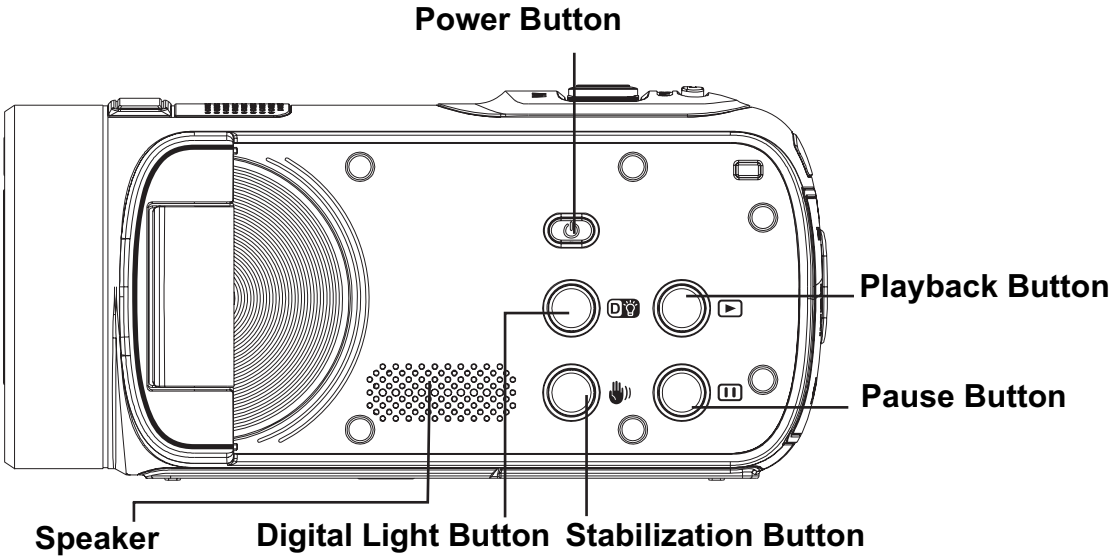
Front View



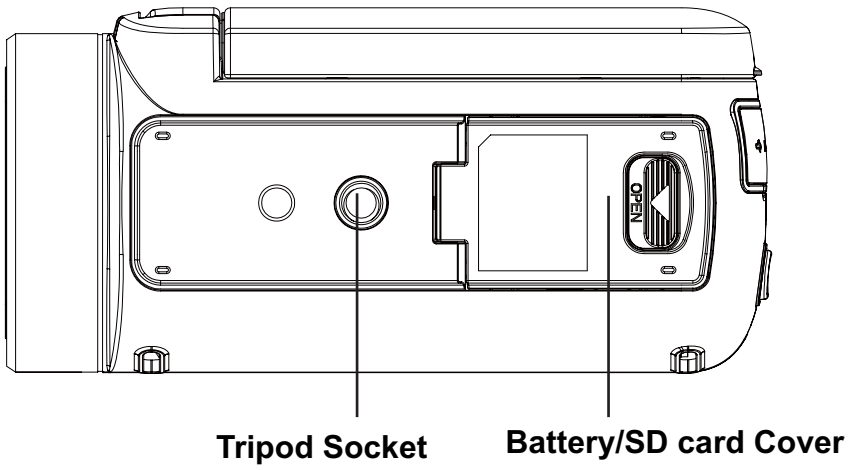
Rear View



Side View

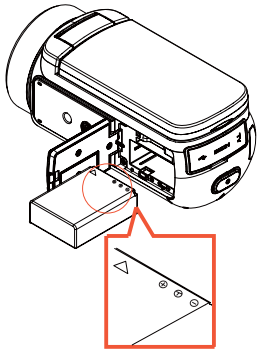


Bottom View



Section 2
Getting Started

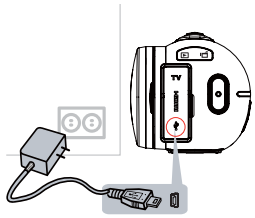
Loading the Battery

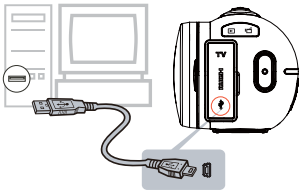


Before using the camera, you must load the supplied Lithium-ion rechargeable battery.

1. Insert the battery according to the correct polarity marks (+ or -).
2. Close the battery cover firmly.

Charge your battery





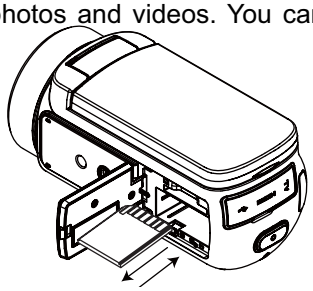
You must use the supplied AC charger or the USB cable.

The camera must be turned OFF; blinking light confirms charging, and the light becomes constant when the charging has been completed.

In AC charging Mode, the light will turn itself off automatically after 3~5 minutes . The full charge time is about 4 to 5 hours. (Actual charging time may vary. It depends on the battery conditions.)

The full charge battery usage for continuous Full HD (1080p 30) video recording is about 1.5~2 hours.

Inserting and Removing an SD Card (Optional)

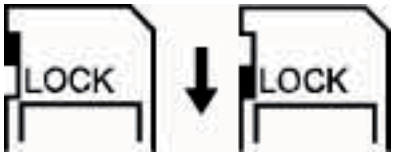


The camera comes with an internal memory which allows you to store photos and videos. You can expand the memory capacity by using an optional SD memory card.

1. Insert the memory card into the slot. Please refer to the figure on the right side.
2. To remove an installed SD card, press the card inwards to release it.
3. When the card pops out, gently remove it from its slot.
4. Recommended memory capacity: 1GB or above.

Note

- When a memory card is fitted, videos/photos are saved on the card rather than on the built-in memory.
- *Protecting Data on an SD Card: SD Card is read-only when it is locked. No photos or videos can be recorded when the SD card is locked. Make sure the lock is on the writeable position before recording any media.*



Writeable position

Write-Protected Position

Turning the Camera On

- To turn on the camera:
  1. Flip out the LCD panel; the camera will turn on automatically.
  2. Or press [Power Button] for one second to turn it on.

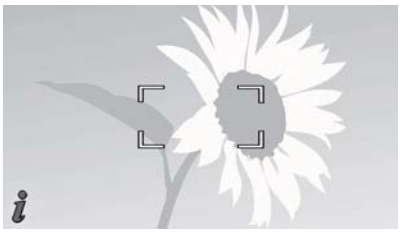
Configuring the Initial Date and Time Setup

- The time setting screen appears to allow you to setup date and time:

Operation	Display Screen
1. Touch Year, Month, Day, Hour, Minute, and AM/PM to set. 2. Adjust the numeric value by touching / 3. Touch the [OK] icon to validate the setting. 4. Touch the Exit icon ( ) to exit.	

Getting Started

- To record video: Press [Video Button] to record video. To stop recording, press it again.
- To pause recording: Press [Pause Button] to pause recording. To continue the recording, press it again.
- To take a photo during video recording: When recording video, press [Photo Button] to capture the image. The Dual record icon ( ) appears on the LCD monitor.
- To take a photo: Press [Photo Button] halfway down until the focusing frame turns from white to green. Then, press it fully down to take photo.

	
Focusing Frame: White	Focusing Frame: Green

- To view stored videos and photos: Press [Playback Button] or touch on the screen to switch to the Playback mode.

Turning the Camera Off

- To turn off the camera: You can either press [Power Button] for one second, or you can place the LCD panel back to its original position.

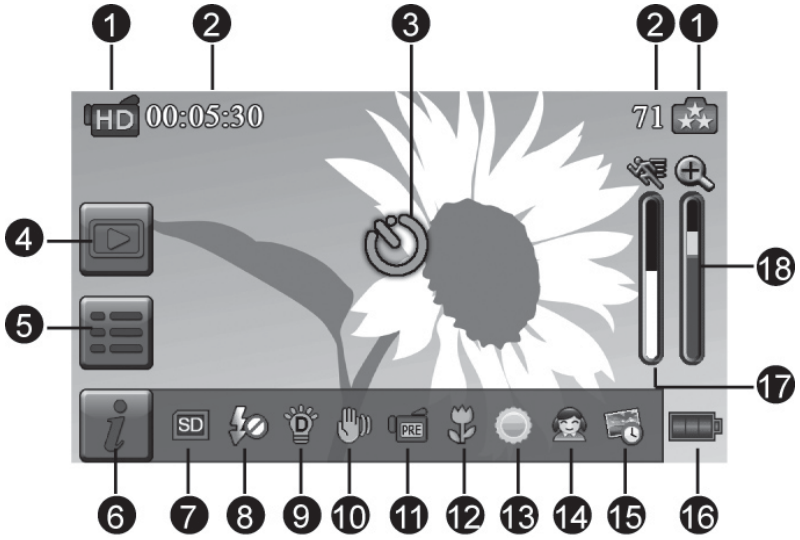
Section 3
Enjoying the Record Mode

Button Function

	Video Button: 1. Press to take video. 2. To stop recording, press it again.
	Photo Button: 1. Press to take photo. 2. When recording video, press to capture the image.
	Tele Button: 1. Zoom In. **Wide Button** 1. Zoom out.
	Power Button: 1. Press down for one second to turn on or turn off the camera.
	Playback Button: 1. Switch between Record / Playback Mode. 2. For quick review, press it after recording.
	Pause Button: 1. Press to pause the recording. 2. To continue the recording, press it again.
	Digital Light Button: Digital Light On/Off.
	Stabilization Button: Stabilization On/Off.

LCD Monitor Information

The indicators shown below may display on LCD when videos and photos are recorded:



(1)	Video Resolution	
	FHD	Full HD (1080p 30 fps)
	HD+	HD (720p 60 fps)
	HD	HD (720p 30 fps)
	VGA	VGA (640X480)
		Slow Motion (Record video at 432x240(QVGA) resolution.)
	Photo Resolution	
		16MP
		5MP
		3MP
(2)	00:05:30	Recording time of the video that can still be taken at current resolution
	71	Number of images that can still be taken at current resolution
(3)		Self-timer enabled
		Dual Record
(4)		Playback Mode On
(5)		Menu On
(6)		Information bar On

(7)		SD Card Inserted
(8)		Flash Auto (Photo Recording Only)
		Red Eye Reduction (Photo Recording Only)
		Flash Off
(9)		Digital Light On
(10)		Stabilization
(11)		Pre-Record Mode
		Time Lapse
(12)		Macro Focusing On
(13)		Daylight
		Fluorescent
		Tungsten
(14)	Scene	
		Skin
		Night
		Backlight
		Black/White
		Classic
		Negative
(15)		Date Printing On
(16)		Battery: full power
		Battery: medium power
		Battery: low power
		Battery: empty power
		DC power mode
(17)		Motion Detection
(18)		Zoom meter: 1X~2700X (23X Optical zoom and 120X Digital zoom)

Note

- *Stabilization, Time Lapse, and Slow Motion functions can not be used simultaneously.*
- *Stabilization and Night Mode functions can not be used simultaneously.*
- *Pre-Record, Motion Detect, Slow Motion, and Time Lapse functions can not be used simultaneously.*

Video Recording

- Press [Video Button] to start recording. When a video is being recorded, a time indicator will display on the LCD monitor (00:00:25). To stop recording, press it again.
- To pause recording: Press [Pause Button] to pause recording (00:00:36). To continue the recording, press it again.
- Dual record: press [Photo Button] to capture the image.The Dual record icon( ) appears on the LCD monitor.
- Press [Playback Button] or touch on the screen to view the recorded video.
- Four resolution settings are available:

Video Quality	
FHD	Full HD (1080p 30 fps)
HD+	HD (720p 60 fps)
HD	HD (720p 30 fps)
VGA	VGA (640X480)

Note

- *The image resolution captured during video recording is the same as the video resolution.*
- *The flash can not be used when capturing image during movies recording.*

Photo Capturing

- Press [Photo Button] halfway down until the focusing frame turns from white to green. Then, press it fully down to take photo.
- Press [Playback Button] or touch on the screen to view the photos.
- Three resolution settings are available:

Image Quality	
	16 Mega Pixels
	5 Mega Pixels
	3 Mega Pixels

Using Zoom Function

- The zoom magnifies images when recording video or taking photo.

1. To zoom in/out, press the Tele/Wide Button.
2. It can be set from 1X~2700X (23X Optical zoom and 120X Digital zoom)

Using Digital Light Function

- The setting allows you to extend the brightness of the objects that are dark or in the shadow. It can extend the dynamic range for backlight and high contrast sense, so that the objects will be brighter and clearer.
- To use the Digital Light function:

1. Press [Digital Light Button] in Record Mode. The Digital Light icon( ) appears on the LCD monitor.
2. Press [Video Button] to start recording or press [Photo button] to take photo.

Using Stabilization Function

- To record with an effect of reducing camera shake to result in more stable video.
- To use the Stabilization function:

1. Press [Stabilization Button] in Record Mode. The Stabilization icon( ) appears on the LCD monitor.
2. Press [Video Button] to start recording.

Showing Information on the screen

- Touch the on-screen button to show or not to show the indicators on the LCD screen.

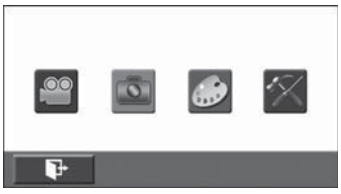
Operation	Screen
1. Touch on the screen. The information bar will show on the screen. 2. Touch again to hide all indicators.	
3. Touch to display the indicators.	

Options for Record Menu

Video	Photo	Effect	Setting*
• Resolution • Pre-record • Motion Detect • Slow Motion • Time Lapse	• Resolution • Flash • ISO • Self-Timer	• Scene • WB(White Balance) • Macro Mode	• Sound • TV • Language • Time Setting • Date Printing • Format • Default Setting

** Please refer to Section 5 for the detailed information about [Setting].*

Operations for Record Mode

Operation	Display Screen
1. Touch on the screen in Record Mode. The menu will show on the screen.	
2. Touch the option icons on the screen lightly with your finger. The options are Video, Photo, Effect, and Setting. 3. The option submenu will pop up on the screen. 4. Touch to select the specific option you want to adjust. (The selected option will be highlighted.) 5. Touch the Exit icon ( ) to exit.	

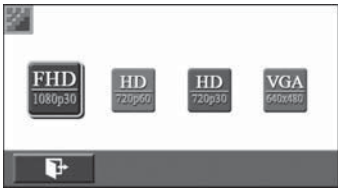
Video

Operation	Display Screen
1. Touch on the screen in Record Mode. The menu will show on the screen. 2. Touch the [Video] icon on the screen. Submenu of Video will pop out on the screen. 3. The Video submenu contains 5 options-- Resolution, Pre-record, Motion Detect, Slow Motion, and Time Lapse --for you to adjust the camera settings.	

Video Resolution

Four resolution settings are available.

- **FHD (1080p 30):**Record videos at 1920x1080p 30 fps resolution.
- **HD+ (720p 60):**Record videos at 1280x720p 60 fps resolution.
- **HD (720p 30):**Record videos at 1280x720p 30 fps resolution.
- **VGA (640X480):** Record videos at 640x480p 30 fps resolution.

Operation	Display Screen
1. In the Video menu, touch the [Resolution] icon on the screen. 2. Touch to select the desired option. 3. Touch the Exit icon ( ) to exit.	

Pre-record

The Pre-record function ensures that you will not miss any critical recording opportunities. The videos are recorded 3 seconds more before the [Video Button] is pressed.

Operation	Display Screen
1. In the Video menu, touch the [Pre-record] icon on the screen. 2. Touch to select [Off] or [On] ( ). 3. Touch the Exit icon ( ) to exit.	

Note

- *Aim the camera at the subject and position it securely.*

Motion Detection

Record videos automatically when the camera detects a movement.

Operation	Display Screen
1. In the Video menu, touch the [Motion Detect] icon on the screen. 2. Touch to select [Off] or [On] (✔ ✖). 3. Touch the Exit icon (⏏) to exit. 4. Camera will start to record video automatically if it detects a movement. Stop recording if it does not detect a movement.	

Slow Motion

Record videos with slow motion effect. When the video is played, the playback time will be longer than the actual recording time.

Operation	Display Screen
1. In the Video menu, touch the [Slow Motion] icon on the screen. 2. Touch to select [Off] or [On] (✔ ✖). 3. Touch the Exit icon (⏏) to exit.	

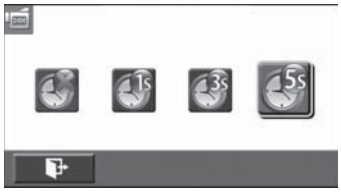
Note

- *Pause function can not be used when Slow Motion function is activated.*

Time Lapse

Record still images at specific intervals you can set and play them as one video file.

- **Off:** Disable Time Lapse.
- **1 Second.:** Record one frame per second.
- **3 Seconds:** Record one frame every 3 seconds.
- **5 Seconds:** Record one frame every 5 seconds.

Operation	Display Screen
1. In the Video menu, touch the [Time Lapse] icon on the screen. 2. Touch to select the desired option. 3. Touch the Exit icon (⏏) to exit.	

Note

- *Pause function can not be used when Time Lapse function is activated.*

Photo

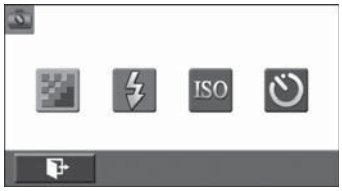
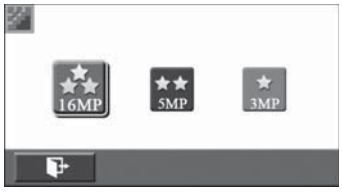
Operation	Display Screen
1. Touch on the screen in Record Mode. The menu will show on the screen. 2. Touch the [Photo] icon on the screen. Submenu of Photo will pop out on the screen. 3. The Photo submenu contains 4 options-- Resolution, Flash, ISO, and Self-Timer --for you to adjust the camera settings.	

Photo Resolution

Three resolution settings are available.

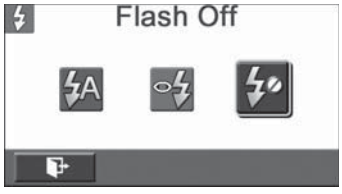
- **16MP:**Shoot photo at 4608 x 3456, 16MP quality.
- **5MP:**Shoot photo at 2592 x 1944, 5MP quality.
- **3MP:**Shoot photo at 2048 x 1536, 3MP quality.

Operation	Display Screen
1. In the Photo menu, touch the [Resolution] icon on the screen. 2. Touch to select the desired option. 3. Touch the Exit icon ( ) to exit.	

Flash

This camera has three flash settings.

- **Flash Auto:**The flash fires automatically according to light conditions. Use this mode for general photography.
- **Red Eye Reduct.** (Red Eye Reduction) **:**The pre-flash will fire to reduce the red-eye effect.
- **Flash Off:** The flash will not fire under any circumstances. Use this mode when taking photo in a place where flash photography is prohibited, or when the subject is distant (beyond the range of the flash).

Operation	Display Screen
1. In the Photo menu, touch the [Flash] icon on the screen. 2. Touch to select the desired option. 3. Touch the Exit icon ( ) to exit.	

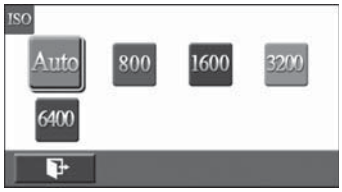
Note

The flash will be disabled automatically when the battery power is low ( ).

ISO

The camera adjusts the ISO sensitivity of its images automatically. Four manual ISO sensitivity settings are available. (800/1600/3200/6400).

The larger the number is, the higher the ISO sensitivity is set to. Select a small number to shoot a smoother image. Select a large number to shoot an image in a dark location or to shoot a subject moving at high speed.

Operation	Display Screen
1. In the Photo menu, touch the [ISO] icon on the screen. 2. Touch to select the desired option. 3. Touch the Exit icon ( ) to exit.	

Note

The image may become noisy when the ISO number is large.

Self-Timer

The self-timer allows you to take photos with a ten-second time delay. The self-timer light on the front of the camera will also blink. The speed of blinking will increase just before the photo is taken.

Operation	Display Screen
1. In the Photo menu, touch the [Self-timer] icon on the screen. 2. Touch to select [Off] or [On] ( ). 3. Touch the Exit icon ( ) to exit.	

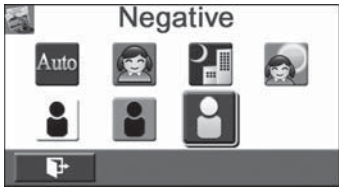
Effect

Operation	Display Screen
1. Touch on the screen in Record Mode. The menu will show on the screen. 2. Touch the [Effect] icon on the screen. Submenu of Effect will pop out on the screen. 3. The Effect submenu contains 3 options--Scene, White Balance, and Macro Mode --for you to adjust the camera settings.	

Scene

You can select the mode according to the scene condition.

- **Auto:** Shoot without any special effect on the image.
- **Skin:** Shoot with an effect that makes skin tones more natural.
- **Night:** Use Night Mode for night scenes or low light conditions.
- **Backlight:** You can take shots when the bright light is behind the subject.
- **Black/White:** The image is converted to black-and-white.
- **Classic:** The image is converted to a sepia look.
- **Negative:** The image is converted as the negative of the normal.

Operation	Display Screen
1. In the Effect menu, touch the [Scene] icon on the screen. 2. Touch to select the desired option. 3. Touch the Exit icon ( ) to exit.	

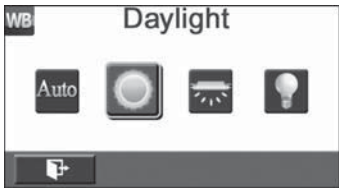
Note

To avoid blurry photos, place the camera on a flat, steady surface, or use a tripod when taking shots in the Night Mode.

White Balance

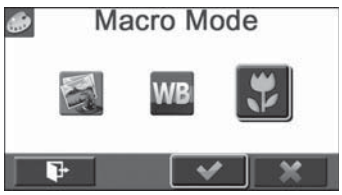
The camera adjusts the colour balance of images automatically. Three manual white balance settings are available:

- **Auto:** The clolur automatically adjusts white balance.
- **Daylight:** Under outdoor condition.
- **Fluorescent:** Under fluorescent light condition.
- **Tungsten:** Under tungsten light condition.

Operation	Display Screen
1. In the Effect menu, touch the [White Balance] icon on the screen. 2. Touch to select the desired option. 3. Touch the Exit icon ( ) to exit.	

Macro Mode

You can select the mode for recording close-up video and photo.

Operation	Display Screen
1. In the Effect menu, touch the [Macro Mode] icon on the screen. 2. Touch to select [Off] or [On] ( ). 3. Touch the Exit icon ( ) to exit.	

Section 4
Enjoying the Playback Mode

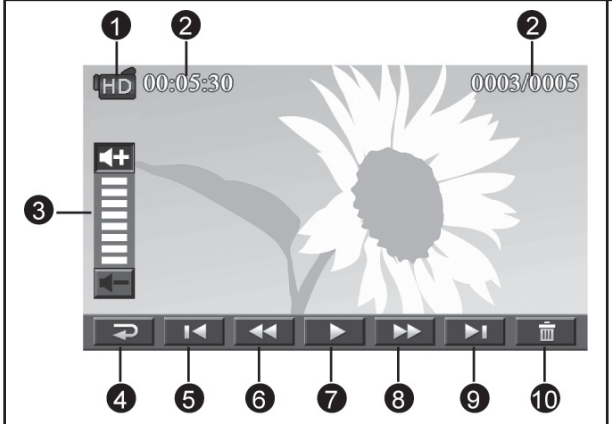
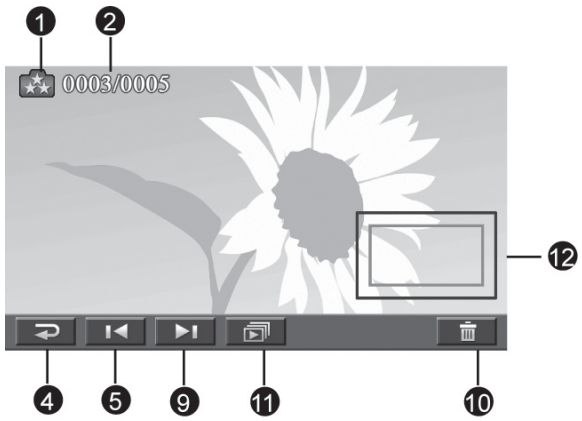
Button Function

The Buttons have the following functions in Playback Mode.

	Video Button: 1. Switch to Record Mode.
	Tele Button: 1. Zoom In. **Wide Button** 1. Zoom out.
	Playback Button: 1. Switch between Record / Playback Mode. 2. For quick review, press it after recording.
	Pause Button: 1. In Video Playback Mode, press to pause the recorded video.

LCD Monitor Information

Indicators on the LCD screen while in Playback Mode:

Video Playback Mode	Photo Playback Mode
	

(1)	Video Resolution	
	FHD	Full HD (1080p 30 fps)
	HD+	HD (720p 60 fps)
	HD	HD (720p 30 fps)
	VGA	VGA (640X480)
		Slow Motion (432x240(QVGA))
	Photo Resolution	
		16MP
		5MP
		3MP
		Dual Record (The image resolution captured during videos recording is the same as the video resolution.)
(2)	00:05:30	Video playback time counter.
	0003/0005	Current number/ Total number of photo/video.
(3)		Volume
(4)		Return
		Video stop
(5)		Previous video/photo
(6)		Video fast rewind

(7)		Video play
		Video pause
(8)		Video fast forward
(9)		Next video/photo
(10)		Delete
(11)		Slideshow
		Slideshow stop
(12)		Magnification Indicator

Operations for Playback Mode

The Playback Mode is for viewing and managing videos and photos on the built-in memory or on an SD Card.

Operation	Display Screen
1. Press [Playback Button] or touch on the screen to switch to the Playback mode.	
2. Touch to select the specific option. 3. Touch ( ) to back to Record Mode.	

Video Playback

Operation	Display Screen
1. In the Video Playback mode, touch / to play or pause the videos. 2. Sweep to the right or touch to go to the previous video; sweep to the left or touch to go to the next video. 3. While playing videos, touch / to fast rewind/ forward. 4. Touch to increase the volume; touch to reduce the volume. 5. Touch ( ) to exit.	

Note

- *When the LCD is idle for a few seconds, the playback function icons will disappear automatically.*

Delete Videos

Operation	Display Screen
1. Touch to go to the Delete option screen.	
2. Touch [Yes] to delete the current video or [No] to cancel the operation and to exit; touch [All (Delete All)] to delete all videos. 3. Before all videos are about to be deleted, a confirmation screen will appear; touch [Yes] to execute the operation and [No] to cancel the operation.	

Note

- *If a memory card has been inserted, you can only delete those videos stored on the card.*
- *Videos on a written-protected memory card cannot be deleted.*

Photo Playback

Operation	Display Screen
1. In the Photo Playback mode, sweep to the right or touch to go to the previous photo; sweep to the left or touch to go to the next photo. 2. While the photo is selected, press [Tele Button] to magnify. (The magnification Indicator appears on the screen) 3. To navigate the magnified photo, press on the screen and move as well. (The inner Magnification Indicator turns red) 4. Press [Wide Button] to zoom out or exit the magnification mode. 5. Touch / to start or to stop the slide show. 6. Touch ( ) to exit.	

Note

- *When the LCD is idle for a few seconds, the playback function icons will disappear automatically.*

Delete Photo

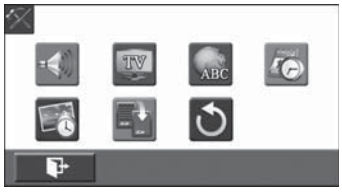
Operation	Display Screen
1. Touch to go to the Delete option screen.	
2. Touch [Yes] to delete the current photo or [No] to cancel the operation and to exit; touch [All (Delete All)] to delete all photos. 3. Before all photos are deleted, a confirmation screen will appear; touch [Yes] to execute the operation and [No] to cancel the operation.	

Note

- *If a memory card has been inserted, you can only delete those photos stored on the card.*
- *Photos on a written-protected memory card cannot be deleted.*

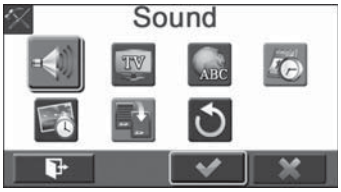
Section 5
Setting Your Camera

Setting Menu

Operation	Display Screen
1. Touch on the screen in Record Mode. The menu will show on the screen. 2. Touch the [Setting] icon on the screen. Submenu of Setting will pop out on the screen. 3. The Setting submenu contains 7 options for configuring your camera setup. They are Sound (operation sound), TV, Language, Time Setting, Date Printing, Format, and Default Setting.	

Sound

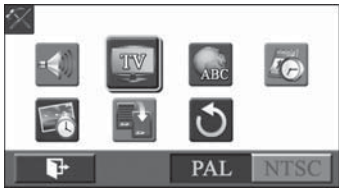
Enable or disable the keypad tone and the operation sound.

Operation	Display Screen
1. In the Setting menu, touch the [Sound] icon on the screen. 2. Touch to select [Off] or [On] ( ). 3. Touch the Exit icon ( ) to exit.	

TV

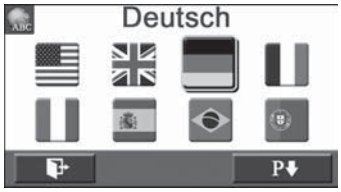
Ensure that the appropriate TV standard of your area is selected – either NTSC or PAL. Wrong TV system setting may cause image flickers.

- **NTSC**(60Hz)**:**USA, Canada, Japan, South Korea and Taiwan, etc.
- **PAL**(50Hz)**:**UK, Europe, China, Australia, Singapore and Hong Kong, etc.

Operation	Display Screen
1. In the Setting menu, touch the [TV] icon on the screen. 2. Touch to select [PAL] or [NTSC]. 3. Touch the Exit icon ( ) to exit.	

Language

Use this option to select the language of the user interface.

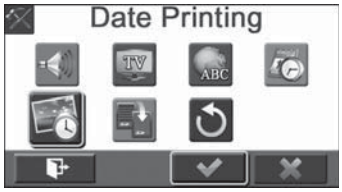
Operation	Display Screen
1. In the Setting menu, touch the [Language] icon on the screen. 2. Touch to select the desired option. 3. Touch the Exit icon ( ) to exit.	

Time Setting

Operation	Display Screen
1. In the Setting menu, touch the [Time Setting] icon on the screen to enter the time setting screen. 2. Touch Year, Month, Day, Hour, Minute, and AM/PM to set. 3. Adjust the numeric value by touching / 4. Touch the [OK] icon to validate the setting. 5. Touch the Exit icon ( ) to exit.	

Date Printing

Imprint the date and time on the video and photo.

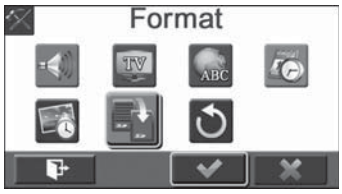
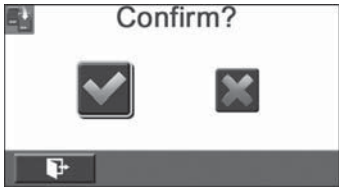
Operation	Display Screen
1. In the Setting menu, touch the [Date Printing] icon on the screen. 2. Touch to select [Off] or [On] ( ). 3. Touch the Exit icon ( ) to exit.	

Note

- *Date Printing function can not be used when Slow Motion function is activated.*

Format

- **Yes:** Format the built-in memory (When there is no SD card in the camera) / SD Card (When there is an SD card in the camera).
- **No:** Do not format the built-in memory (When there is no SD card in the camera) / SD Card (When there is an SD card in the camera).

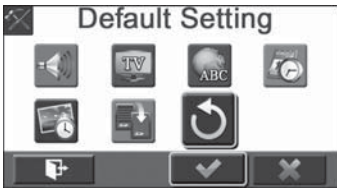
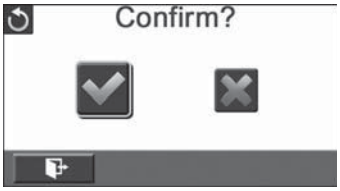
Operation	Display Screen
1. In the Setting menu, touch the [Format] icon on the screen. 2. Touch to select [Yes] or [No] (✔ ✖). (Touch [Yes] ✔ to enter the confirmation screen.)	
3. Touch the [Yes ✔] icon to execute the operation and the [No ✖] icon to cancel the operation.	

Note

All the data will be erased if the SD card is formatted. Make sure all the data are copied to your PC before formatting the SD card.

Default Setting

To restore the default factory setting, select this option.

Operation	Display Screen
1. In the Setting menu, touch the [Default Setting] icon on the screen. 2. Touch to select [Yes] or [No] (✔ ✖). (Touch [Yes] ✔ to enter the confirmation screen.)	
3. Touch the [Yes ✔] icon to execute the operation and the [No ✖] icon to cancel the operation.	

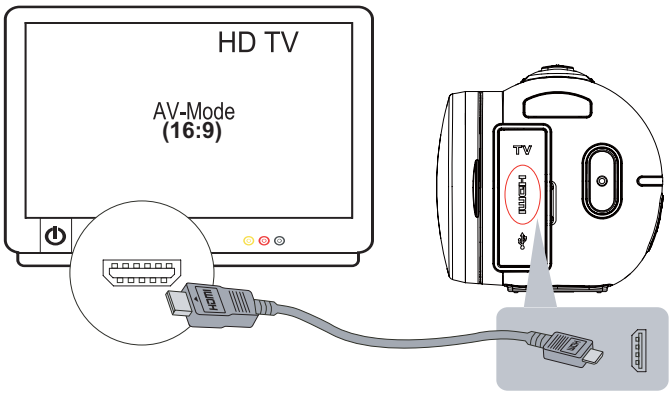
The following table indicates the camera's default settings

Setting	Default Factory Setting
Resolution	FHD (1080p 30) for Video 5MP for Photo
Stabilization	Off
Motion Detection	Off
Slow Motion	Off
Time Lapse	Off
Self-Timer	Off
ISO	Auto
Scene	Auto
White Balance	Auto
Flash	Off
Sound	On
TV	Depends on shipping area
Language	Depends on shipping area
Date Printing	Off
Volume	Level 6

Section 6
Viewing Photos and Videos on TV

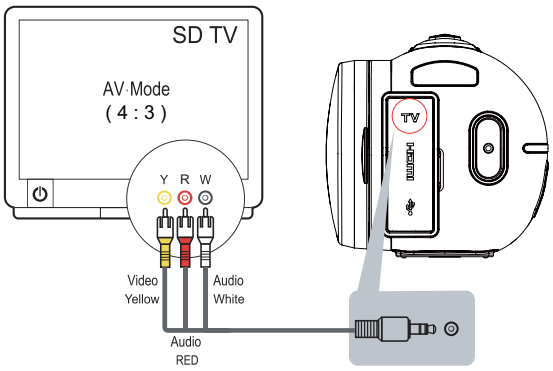
Connecting to a High-Definition 16:9(Wide) TV

1. Connect the HDMI cable to your camera's HDMI Out port.
2. Connect the other end of the cable to a television.
3. Set the video input source of your TV to " HDMI."
4. The steps for viewing stored videos and photos on HDTV are exactly the same as for viewing them on the LCD monitor.



Connecting to a non-high-definition 4:3 TV

1. Connect one end of the AV cable to your camera's AV out port.
2. Connect the other end of the cable to a television.
3. The steps for viewing stored videos and photos on TV are exactly the same as for viewing them on the LCD monitor.



Section 7
Viewing Video & Photo on PC

Installing Bundled Software

The CD-ROM supplied with this camera contains 2 pieces of software.

- **ArcSoft MediaImpression** is a user-friendly application that helps you managing your media, burning your video into DVD, and uploading your files to the web sites easily.
- **Adobe Reader** is a popular program that you need to have installed to read the User's Manual. Many computer users will find they already have this software installed on their computer.

To install the bundled software:

1. Insert the CD-ROM into your computer's CD-ROM drive. The autorun screen appears.
2. Click "Install ArcSoft MediaImpression". Follow the on-screen instructions to complete the installation.

Note

- *The detailed Instructions for the bundled software can be found within the program once the installation is completed. Click on [Extras] on the title bar and select [Help] to open the instruction manual.*
- *Install the bundled software application, ArcSoft MediaImpression, for viewing the videos correctly on a PC.*

Transferring Photos or Videos to a Computer

You can transfer photos or videos stored on your camera to a computer and send them in e-mails to friends or post them on the web sites.

To do this you should:

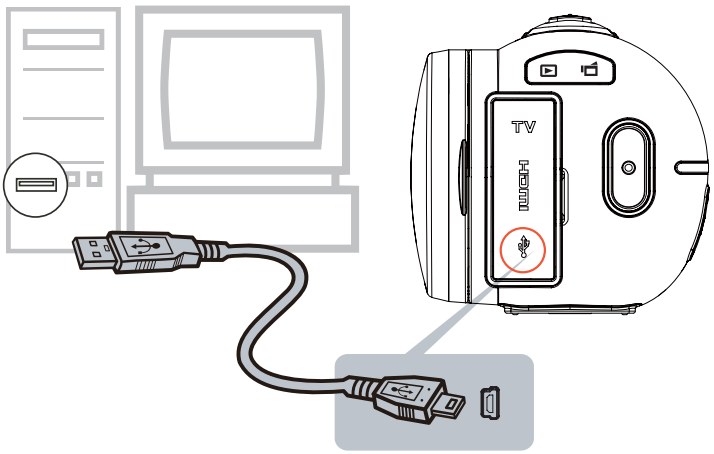
1. Connect the computer and camera with the supplied mini USB 2.0 cable. .
2. The videos and photos can be found on your computer at "My Computer\Removable Disk\ DCIM\100MEDIA". (On the SD card in the camera)
3. The videos and photos can be found on your computer at "My Computer\DV(X:)\DCIM\100MEDIA". (On the internal memory of the camera)
4. Under these folders, you can view, delete, move, or copy any video/photo you want.

Section 8
Uploading Files to Internet

The built-in **Internet Direct** application offers you an easy way to upload your files to Internet instantly. It helps you share them with your family and friends on the web site.

To upload files to Internet:

1. Connect the camera to your computer by using the supplied USB cable.



2. After making a USB connection, the AutoPlay window will appear. (It may be different based on OS recognition. If the AutoPlay window does not appear. Please click [My Computer]-->[DVAP]-->[DVAP.exe] to execute the application.)

DVAP (L:)
This disk or device contains more than one type of content.
What do you want Windows to do?
Internet Direct
using the program provided on the device
Print the pictures
using Photo Printing Wizard
View a slideshow of the images
using Windows Picture and Fax Viewer
Copy pictures to a folder on my computer
using Microsoft Scanner and Camera Wizard
Open folder to view files
using Windows Explorer
Take no action
OK
Cancel

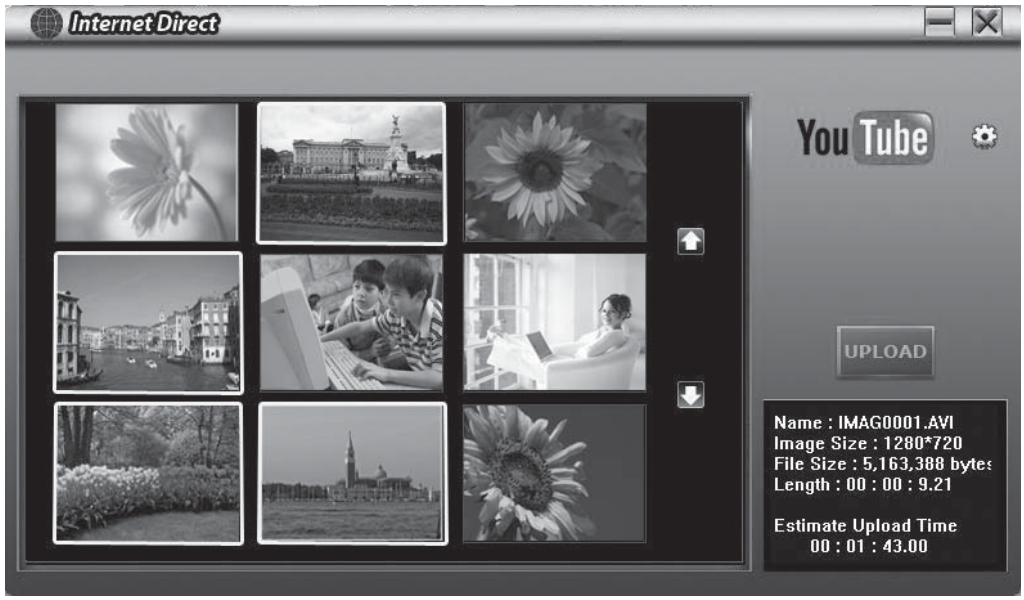
(In Windows XP)

3. The main screen appears automatically on the desktop. (To view the recorded clips on Internet Direct, it is necessary to install ArcSoft MediaImpression first.)

Note

- *The web site may be not allowed to access in certain regions.*

4. On the thumbnail screen, click on the up/down icon to change the pages. Click on the file(s) you want to upload.
5. Click on " UPLOAD" to start uploading.



6. Click on “ CANCEL” to stop uploading.

To playback the video file:

1. Double click on the video clip on the thumbnail screen.
2. Click on the Play/Pause icon to play/pause. Click on the Return icon to return to the thumbnail preview screen.

To setup your account information for the website:

1. Click on to go to the setup screen.
2. Fill in your account information in the blanks. Then click on “Save”.

(If you do not have a account, please sign up on the website first.)

Section 9
Specifications and System Requirements

Specification

Image sensor	5 Mega pixel CMOS sensor
Operation modes	Video record, Photo record
Lens	Auto Focus Lens (F3.5)
Focus range	Macro Mode:1cm~120cm Normal Mode: 1 cm ~ infinite
Zoom	1X~2700X (23X Optical zoom and 120X Digital zoom)
Shutter	Electronic
LCD monitor	3” touch LCD (16:9)
Storage media	Built-in 128MB memory (partial memory is used for firmware code and sofeware); SD/SDHC/SDXC card slot support (up to 64GB)
Image resolution	High 4608 x 3456 (16M pixels) (Interpolated) Standard 2592x1944 (5M pixels) Low 2048x1536 (3M pixels)
Video resolution	FHD (1080p 30) 1920X1080(30fps) HD+ (720p 60) 1280X720(60fps) HD (720p 30) 1280X720(30fps) VGA (640X480) 640X480(30fps)
White balance	Auto/Manual (Daylight, Fluorescent, Tungsten)
ISO	Auto/800/1600/3200/6400
Self-timer	10 seconds delay
Flash	Flash Auto/Red-Eye-Reduction/Flash Off
File format	Photo: JPG Video: AVI (H.264)
Image play	Single image/Slideshow
PC interface	Mini USB 2.0 port
TV out	NTSC/PAL selectable, HDMI
Battery	Lithium-ion rechargeable battery
Dimension	126mm (L) x 57mm (H) x 60mm (W)
Weight	340g (without battery)

System requirements

- Microsoft Windows XP/Vista/7
- Intel Pentium 4, 2.4 GHz or above
- 512 MB RAM
- 1 GB free HDD space
- Available USB port
- CD-ROM Drive
- 16-bit Colour Display

Note

The LCD screen is manufactured using extremely high-precision technology, so over 99.99% of the pixels are operational for effective use. However, some tiny black and/or bright dots (white, red, blue or green) may appear on the LCD screen. These dots are a normal result of the manufacturing process, and do not affect the recording.

Section 10
Troubleshooting

Troubleshooting

1. The flash is not working.

The battery power is low.

The camera is in DC power mode.

In flash auto mode, camera flash fires ONLY when necessary (in dark setting as example).

2. The files on the memory card do not display smoothly when the LCD shows the "!" marking.

The "!" means the SD card is low speed or is having wrong content inside. The way to solve this condition is to format SD card by the camera instead of a PC (Please refer to the detailed Format instruction in Section 5).

Or please change the SD/SDHC/SDXC card to a high speed one.

3. Why do some of my indoor photos look blurry and dark?

The camera extends photo exposure time under low light/ indoor condition. Keep the camera (and the target subject) steady for several seconds when taking photos. The shutter will sound when photos are being taken.

4. How do I charge battery?

You must use the supplied AC charger or the USB cable. The camera must be turned OFF; blinking light confirms charging, and the light becomes constant after the charging is completed.

In AC charging Mode, the light will turn itself off automatically after 3~5 minutes . The full charge time is about 4 to 5 hours. (Actual charging time may vary. It depends on the battery conditions.) The full charge battery usage for continuous Full HD (1080p 30) video recording is about 1.5~2 hours.

5. After connecting the USB cable to the computer, ……

1. The disk [DV] indicates the internal memory of the camera. (The disk label may be different according to different model and PC OS.)
2. [Removable Disk] indicates the external memory. (On the SD/SDHC/SDXC card in the camera)
3. The disk [DVAP] indicates the built-in Internet Direct application is saved at this disk. It is protected from formatting and deleting.

Section 11
Additional Information

Regulatory Information

The above mark is in compliance with the Waste Electrical and Electronic Equipment Directive 2002/96/EC (WEEE). The mark indicates the requirement NOT to dispose the equipment including any spent or discarded batteries as unsorted municipal waste, but use the return and collection systems available. If the batteries or accumulators included with this equipment display the chemical symbol Hg, Cd, or Pb, then it means that the battery has a heavy metal content of more than 0.0005% Mercury, or more than 0.002% Cadmium or more than, 0.004% Lead.

Support

KESA group and its representative companies are responsible for after sales service.

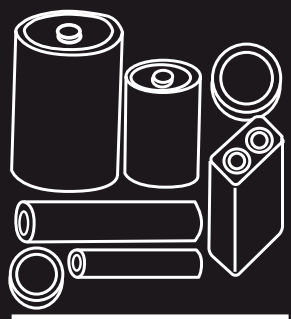
In the unlikely event of a problem developing, please contact the store where you purchased your equipment.

We continually strive to improve our products; specifications may change without prior notice.

For advice on where to purchase accessories, please contact the store where you purchased your equipment.

KESA Electricals S.A.S., 37 rue de la Victoire 75009, Paris, France.

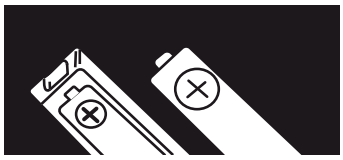
We continually strive to improve our products; specifications may change with out prior notice. For advice on where to purchase accessories, please contact the store where you purchased your equipment Hitachi cannot compensate for any damages caused when recording is not made normally or recorded contents cannot be played back because of a defect in the digital camera device or memory card. Hitachi cannot be responsible for your recorded video and audio. If you or a third party make a mistake when handling this digital camera device or memory card, etc., the recorded contents may be lost. Hitachi cannot be responsible for compensation for damage due to loss of recorded contents.



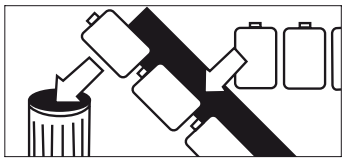
BATTERY SAFETY GUIDELINES

Used correctly, domestic batteries are a safe and dependable source of portable power. Problems can occur if they are misused or abused — resulting in leakage or, in extreme cases, fire or explosion.

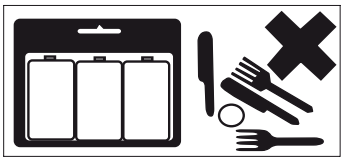
Here are some simple guidelines to safe battery use designed to eliminate any such problems.



Take care to fit your batteries correctly, observing the plus and minus marks on the battery and appliance. Incorrect fitting can cause leakage or, in extreme cases, fire or even an explosion.

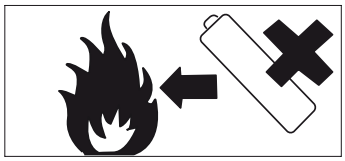


Replace the whole set of batteries at one time, taking care not to mix old and new batteries or batteries of different types, since this can result in leakage or, in extreme cases, fire or even an explosion.



Store unused batteries in their packaging and away from metal objects which may cause a short-circuit resulting in leakage or, in extreme cases, fire or even an explosion.

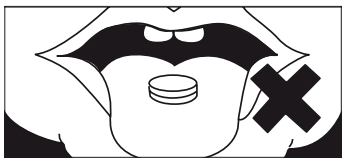
Remove dead batteries from equipment and all batteries from equipment you know you are not going to use for a long time. Otherwise the batteries may leak and cause damage.



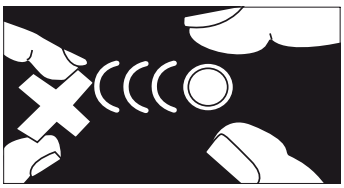
Never dispose of batteries in fire as this can cause them to explode. Please recycle dead batteries; do not put with the normal household waste.

Never attempt to recharge ordinary batteries, either in a charger or by applying heat to them. They may leak, cause fire or even explode. There are special rechargeable batteries which are clearly marked as such.

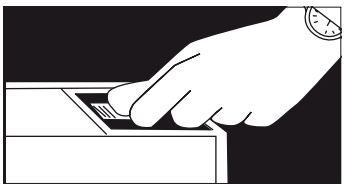
Supervise children if they are replacing batteries themselves in order to ensure these guidelines are followed.



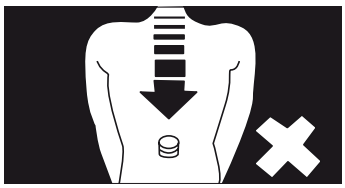
Remember that small button cell batteries such as used in some hearing aids, toys, games and other appliances, are easily swallowed by young children and this can be dangerous.



Keep loose button cells away from young children.



Make sure battery compartments are secure.



Seek medical advice if you believe a cell has been swallowed.

SD Card Capacity and Approximate Recording Time

Memory Card Capacity	Video Resolution	Approximate Recordable Time (Minutes)
1 G	FHD(1080p 30)	00:11:08
	HD+ (720p 60)	00:11:08
	HD(720p 30)	00:16:43
	VGA (640X480)	00:33:26
2 G	FHD(1080p 30)	00:22:10
	HD+ (720p 60)	00:22:10
	HD(720p 30)	00:33:15
	VGA (640X480)	01:06:30
4 G	FHD(1080p 30)	00:43:45
	HD+ (720p 60)	00:43:45
	HD(720p 30)	01:05:38
	VGA (640X480)	02:11:17
8 G	FHD(1080p 30)	01:30:33
	HD+ (720p 60)	01:30:33
	HD(720p 30)	02:15:49
	VGA (640X480)	04:31:39
16 G	FHD(1080p 30)	02:58:04
	HD+ (720p 60)	02:58:04
	HD(720p 30)	04:27:07
	VGA (640X480)	08:54:14
32 G	FHD(1080p 30)	05:58:46
	HD+ (720p 60)	05:58:46
	HD(720p 30)	08:58:09
	VGA (640X480)	17:56:18
64 G	FHD(1080p 30)	11:49:29
	HD+ (720p 60)	11:49:29
	HD(720p 30)	17:44:14
	VGA (640X480)	35:28:29

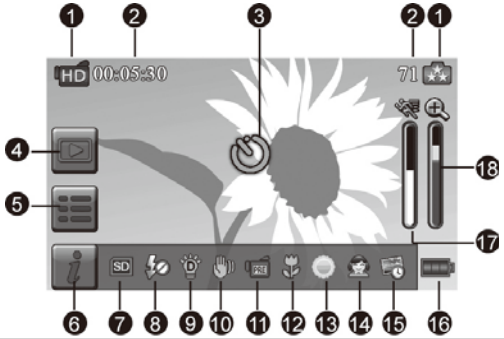
Memory Card Capacity	Photo Resolution	Approximate number of Recordable Pictures
1 G	High (16M pixels)	195
	Standard (5M pixels)	576
	Low (3M pixels)	816
2 G	High (16M pixels)	389
	Standard (5M pixels)	1145
	Low (3M pixels)	1622
4 G	High (16M pixels)	768
	Standard (5M pixels)	2261
	Low (3M pixels)	3203
8 G	High (16M pixels)	1590
	Standard (5M pixels)	4679
	Low (3M pixels)	6628
16 G	High (16M pixels)	3128
	Standard (5M pixels)	9201
	Low (3M pixels)	13035
32 G	High (16M pixels)	6302
	Standard (5M pixels)	18537
	Low (3M pixels)	26262
64 G	High (16M pixels)	12464
	Standard (5M pixels)	36660
	Low (3M pixels)	51935

Manual Appendix

Smile Detect and Face Tracking Function

LCD Monitor Information

The indicator shown below may display on LCD when movies and pictures are recorded:



(11)		Pre-Record Mode
		Time Lapse
		Smile Detection

Photo

Smile Detection

Capture image automatically when the camera detects a smile.

Operation	Display Screen
1. In the Photo menu, touch the [Smile Detect] icon on the screen. 2. Touch to select [On] or [Off] ( ). 3. Touch the Exit icon ( ) to exit.	
4. In Record Mode, aim the camera at the smiling face(s). The face frame(s) will appear around the face with smile.	

5. The camera will focus on the subject.	
6. Then, the camera will capture the photo automatically.	

Effect

Face Tracking

The camera can detect human face(s) and focus on the face(s) automatically. This function can works with video recording and photo capturing. It is wonderful for capturing beautiful portraits in backlight situation.

Operation	Display Screen
1. In the Photo menu, touch the [Smile Detect] icon on the screen. 2. Touch to select [On] or [Off] ( ). 3. Touch the Exit icon ( ) to exit.	
4. In Record Mode, aim the camera at the face(s). The face frame(s) will appear around the face.	

Note

When Face Tracking is activated, aim the camera at the human face(s). The face frame(s) will show on the LCD before the [Record Button] /[Photo Button] is pressed.

Getting Started

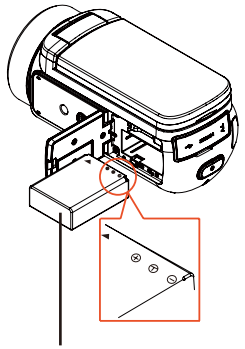
English

Load the rechargeable Li-ion battery /SD card (Optional)

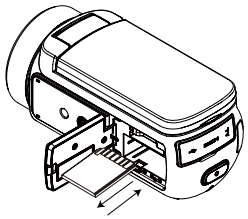
Insert the battery according to the correct polarity marks (+ or -).

Close the battery cover firmly.

Recommended memory capacity of SD card (Optional) --1GB or above.



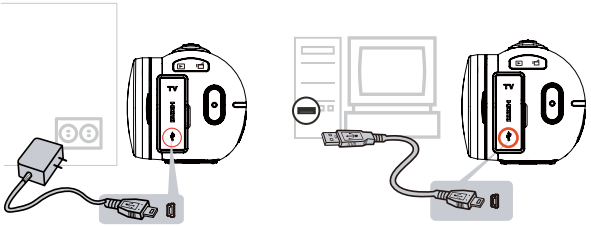
Li-ion battery



Insert the SD card (Optional) into the slot.
To remove the SD card, press it down and take it out.

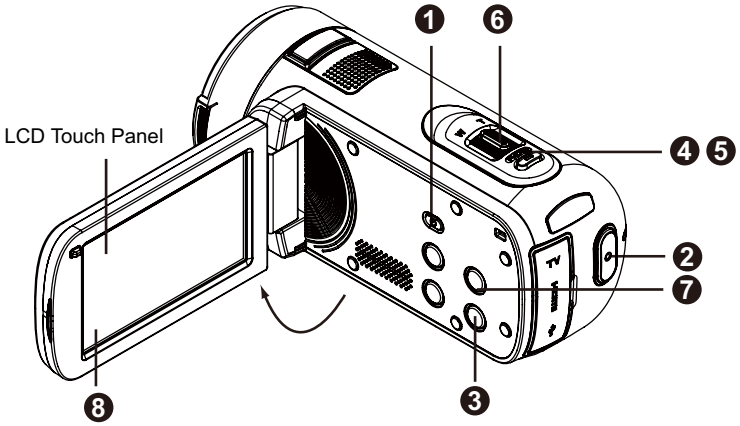
Charge your battery

You must use the supplied AC charger or the USB cable.
The camera must be turned OFF; blinking light confirms charging, and the light becomes constant when the charging has been completed.
In AC charging Mode, the light will turn itself off automatically after 3~5 minutes . The full charge time is about 4 to 5 hours. (Actual charging time may vary. It depends on the battery conditions.)



Record & Play

English



1. Flip to power on

- Flip out the LCD panel or hold [Power Button] for one second.
- If no operation is made in 3 minutes, the camera will turn itself off automatically to conserve battery power.

2. To start or stop recording

- Press

3. To pause recording

- Press

4. Dual record

- When recording videos, press PHOTO to capture the image.
- Dual record icon( ) appears on the LCD monitor.

5. To capture photo

- Press PHOTO

6. To zoom in or out

- Press W T

7. To review videos/photos

- Press or touch (on-screen icon)

8. To operate more advanced options

- Touch (on-screen icon) to access the option menu.

For more detailed operation instructions, please refer to User's Manual.

Plug & Share

English

Viewing Videos and Photos on PC

Install the bundled software application, **ArcSoft MediaImpression** , to view the videos correctly on a PC.

Connect the computer and the camera using the supplied mini USB2.0 cable as shown.

Videos and photos can be found on your computer at

"My Computer\Removable Disk\DCIM\100MEDIA"

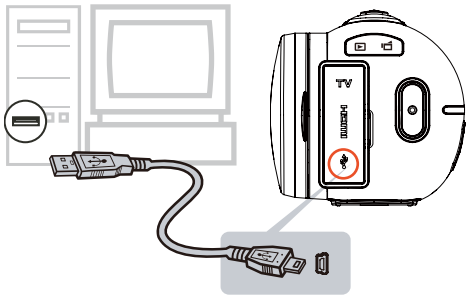
(Under the circumstances of within the SD card in the camera)

Under this folder, you can view, delete, move, or copy the recorded videos and photos you want.

Uploading Files to the Website

You can also share the recorded videos on website via the built-in **Internet Direct** application which offers you an easy way to upload your video clips to the website instantly.

(For more detailed operation instructions, please refer to *User's Manual-Section 8.*)



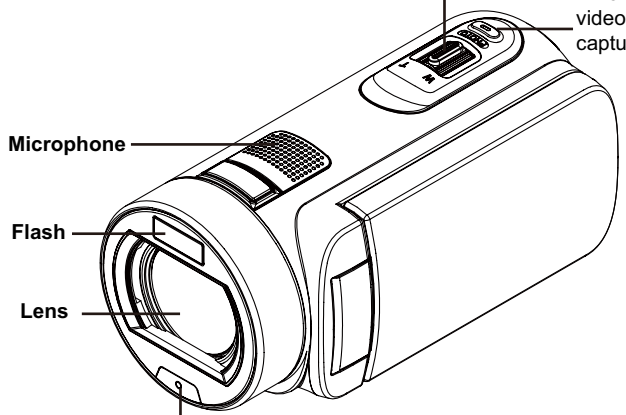
● **ArcSoft MediaImpression** is a user-friendly application that helps you managing your media, burning your video into a DVD, and uploading your videos to the website easily.

The detailed Instructions for the bundled software can be found within the program once the installation is completed.
Click on [Extras] on the title bar and select [Help] to open the instruction manual.

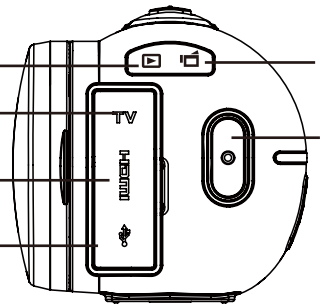
Tour of Your Camera

English

Front / Rear



[Photo] Button
Press to take photos.
When recording videos, press to capture the image.



Playback LED Indicator

Record LED Indicator

TV Port

HDMI Port

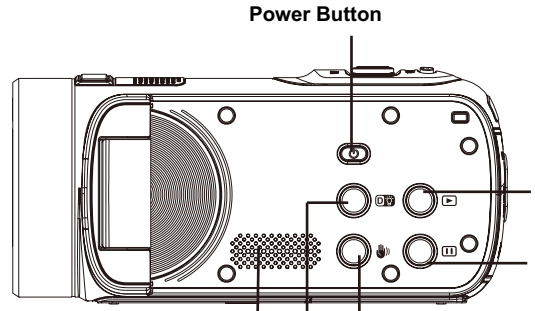
Mini USB 2.0 Port

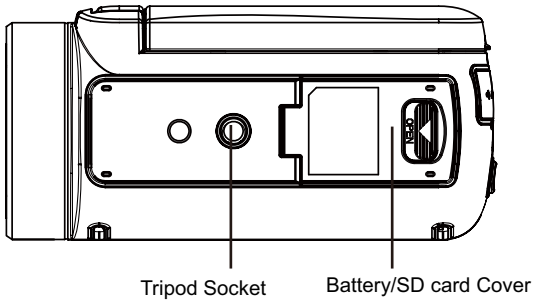
[Video] Button
Press to take videos.
To stop recording, press it again.

Tour of Your Camera

English

Side / Bottom





Troubleshooting

English

1. The flash is not working.

The battery power is low.
The camera is in DC power mode.
In flash auto mode, camera flash fires ONLY when necessary (in dark setting as example).

2. The files on the memory card do not display smoothly when the LCD shows the "!" marking.

The "!" means the SD card is low speed or is having wrong content inside. The way to solve this condition is to format SD card by the camera instead of a PC (Please refer to the detailed Format instruction in User' Manual - Section 5).

Or please change the SD/SDHC/SDXC card to a high speed one.

3. Why do some of my indoor photos look blurry and dark?

The camera extends photo exposure time under low light/ indoor condition. Keep the camera (and the target subject) steady for several seconds when taking photo.

4. How do I charge battery?

You must use the supplied AC charger or the USB cable. The camera must be turned OFF; blinking light confirms charging, and the light becomes constant after the charging is completed.

In AC charging Mode, the light will turn itself off automatically after 3~5 minutes .
The full charge time is about 4 to 5 hours. (Actual charging time may vary.
It depends on the battery conditions.)

5. After connecting the USB cable to the computer, ……

1. The disk [DV] shows the internal memory of the camera. (The disk label may be different according to different model and PC OS.)
2. [Removable Disk] shows the external memory. (Under the circumstances of within the SD/SDHC/SDXC card in the camera)
3. The disk [DVAP] shows the built-in Internet Direct application is saved at this disk. Please DO NOT format this disk or delete the application inside; otherwise, the Internet Direct application can not function.

Regulatory Information

English

The above mark is in compliance with the Waste Electrical and Electronic Equipment Directive 2002/96/EC (WEEE).

The mark indicates the requirement NOT to dispose the equipment including any spent or discarded batteries as unsorted municipal waste, but use the return and collection systems available.

If the batteries or accumulators included with this equipment display the chemical symbol Hg, Cd, or Pb, then it means that the battery has a heavy metal content of more than 0.0005% Mercury, or more than 0.002% Cadmium or more than, 0.004% Lead.

In the unlikely event of a problem developing, please contact the store where you purchased your equipment.

We continually strive to improve our products; specifications may change without prior notice.

For advice on where to purchase accessories, please contact the store where you purchased your equipment.

Hitachi cannot compensate for any damages caused when recording is not made normally or recorded contents cannot be played back because of a defect in the digital camera device or memory card.

Hitachi cannot be responsible for your recorded video and audio.

If you or a third party make a mistake when handling this digital camera device or memory card, etc., the recorded contents may be lost.

Hitachi cannot be responsible for compensation for damage due to loss of recorded contents.

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